DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 70.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-007493
Date Inspected: 30-Jun-2009

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Japan Steel Works

OSM Arrival Time: 730
OSM Departure Time: 1730
Location: Muroran, Japan

CWI Name: Chung Fu Kuan

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Tower, Jacking, and Deviation Saddles

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. Art Peterson was present during the times noted above for observations relative to the work being performed in Fabrication shop #4 at Japan Steel Works.

Machine Shop #4:

Final Machining Operation in process on Saddle: Tower Saddle Segment T1-1

The QA Inspector observed that tower saddle segment T1-1 is located in Machine Shop #4 to have the final machining performed. On this date, the QA Inspector observed the JSW personnel were in process on drilling the holes inside of the north cable trough at the tie-rod locations on tower saddle segment T1-1.

Fabrication Shop #4:

NDT Operation completed on Saddle: Tower Saddle Segment T1-2

The QA Inspector was informed by Quality Control Inspector Mr. Chung Fu Kuan that Nikko Inspection Services (NIS) Quality Control (QC) NDT Inspector Mr. R. Kumagai (#132) performed the magnetic particle test (MPT) inspection (dry method) on areas of complete-joint penetration groove welds 8Y-12L-4, 8Y5L-3, and 8Y5L-4 that were excavated to remove ultrasonic rejectable indications on June 26th 2009 "C" shift. The results of the MPT inspection of the excavated areas were in compliance with the contract specifications.

Re-Beveling Operation in process on Saddle: Tower Saddle Segment T1-3

The QA Inspector observed JSW personnel performing the re-beveling operation on the rib plates and stem plate's prepared edges (face of bevels) on tower saddle T1-3 (steel section). These areas are being re-beveled to the layout marks (scribe lines and punch marks) of the final dimensions of the groove areas prior to the fit-up operation of the

base plate. The QA Inspector observed that the re-beveling operation was in process at the end of the QA Inspectors' shift.

Storage of Saddle: West Deviation Saddle Segment W2-E1
The QA Inspector observed that west deviation saddle segment W2-E1 is located in Fabrication Shop #4. The QA Inspector observed that no other work was performed on west deviation saddle segment W2-E1 on this date.

Storage of Saddle: West Deviation Saddle Segment W2-E2
The QA Inspector observed that west deviation saddle segment W2-E2 is located in Fabrication Shop #4. The QA Inspector observed that no other work was performed on west deviation saddle segment W2-E2 on this date.

Machine Shop #2
Final Machining Operation in process on Saddle: West Deviation Saddle Segment W2-E3
The QA Inspector observed that west deviation saddle segment W2-W3 is located in Machine Shop #2 to have the final machining performed. On this date, the QA Inspector observed the machining of the base plate was being performed on west deviation saddle segment W2-W3.

Fabrication Shop #4
Cleaning Operation completed on Saddle: West Deviation Saddle Segment W2-W1
The QA Inspector observed that the blast cleaning operation was completed on west deviation saddle W2-W1 on the weldments and surrounding base metal. The next operation on the west deviation saddle segment will be the NDT- magnetic particle test inspection (dry method) operation.

Re-positioning of Saddle: West Deviation Saddle Segment W2-W2
The QA Inspector observed that JSW personnel were re-positioning west deviation saddle segment W2-W2 in preparation to change the location on the rib (cast section) to rib plate (steel section) and stem (cast section) to stem plate (steel section) partial-joint penetration double bevel groove butt-joint weld operation. The change in the location of the weld operation also allows for the JSW welding personnel to be able to weld in a more ideal position. The QA Inspector observed that the re-positioning of the west deviation saddle was in process at the end of the QA Inspectors' shift.

Cleaning Operation completed on Saddle: West Deviation Saddle Segment W2-W3
The QA Inspector observed that the blast cleaning operation was completed on west deviation saddle W2-W3 on the weldments and surrounding base metal. The next operation on the west deviation saddle segment will be the NDT- magnetic particle test inspection (dry method) operation.

Buttering Operation on Saddle: West Deviation Saddle Segment W2-W3
The QA Inspector observed the weld surfacing (buttering operation / build-up of weld metal) on the interior of the trough on west deviation saddle segment W2-W3 (cast section). The buttering operation is being performed at specific locations where the temporary attachments (stay plates) will be located for dimensional and distortion control during the weld operation. The QA Inspector observed QC Inspector Mr. Chung Fu Kuan verify prior to the start and during the welding operation that the preheat temperature of 160 degrees Celsius was maintained and the welding parameters of JSW welding personnel Mr. R. Kito (08-5174) were in compliance with WPS SJ-3012-1-2 per the SMAW process in the horizontal and vertical positions using (4) mm diameter LB52A

electrode. The QA Inspector observed that the buttering weld operation on the interior of the trough was in process at the end of the QA Inspectors' shift.

Layout Operation on "Hold" of Rocker Bearing Plate Assembly: East Saddle E2-W1

The QA Inspector observed that rocker bearing plate assembly for E2-W1 is located in Machine Shop #2. The JSW personnel were in preparation to perform the layout operation of the rocker bearing dowel locations against the approved dimensional drawings and assembly control lines but the operation has been put on "hold". The JSW Representative Mr. Hideaki Kon informed the QA Inspector that the reason why the layout operation was put on "hold" was that JSW is waiting the response back from prime contractor American Bridge Fluor / JV regarding the confirmation of the location of the anchor bolt holes on east saddle rocker bearing plate E2-W1.

PWHT Operation completed on End Splay Cover Plate Assemblies: East Saddle E2-E1 and East Saddle E2-W1

The QA Inspector observed that the post weld heat treatment (stress relief) operation was completed on the end splay cover plate assemblies for east saddle E2-E1 and E2-W1 on this date. The next operation on the end splay saddles will be the blast cleaning operation.

Foundry Shop:

Weld Operation pending on Cast Saddle: East Saddle E2-E1

The JSW Representative Mr. Hideaki Kon informed the QA Inspector that the JSW welding personnel will start the major and minor repair welding of the excavated areas on east saddle E2-E1 on July 6th 2009. The QA Inspector observed that no other work was performed on east saddle E2-E1 at the end of the QA Inspectors' shift.

Cleaning Operation pending on Cast Saddle: East Saddle E2-W1

The QA Inspector observed the JSW personnel performing the grinding operation on the completed repair welds to grind smooth to the surface contour of the casting on east saddle E2-W1. The QA Inspector observed that the grinding operation was completed by the end of the QA Inspectors' shift. The next operation to be performed will be the blast cleaning operation.

Grinding Operation pending on Saddle: West Jacking Saddle

The QA Inspector observed that the JSW personnel were in preparation to start the grinding operation on the shaped areas on the outside of the trough section and on the rib sections where previously JSW personnel removed the excess cast material by the scarfing operation- (air-carbon-arc method) on the rough casting of the west jacking saddle. The purpose of the grinding operation is to profile the areas to a smooth finish and subsequently for the NDT operation. On this date, the QA Inspector observed that the grinding operation had not started on the west jacking saddle.

Unless otherwise noted, all observations reported on this date appeared to be in general compliance with the applicable contract specifications.

Summary of Conversations:

No significant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy, 510 385-5910, who represents the Office of Structural Materials for

your project.

Inspected By:	Peterson,Art	Quality Assurance Inspector
Reviewed By:	Guest,Kittric	QA Reviewer